

UC

Assurance Plan

For

Lawrence Berkeley National Laboratory

October 2005

REVIEW AND APPROVAL

The University of California Contract Assurance Council and Lawrence Berkeley National Laboratory Office of Institutional Assurance approve the UC Assurance Plan.

James Hirahara

Executive Director, Business and Finance
University of California Laboratory Operations

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STATEMENT OF LABORATORY POLICY

It is the policy of the Ernest Orlando Lawrence Berkeley National Laboratory (LBNL) to carry out all our activities in a reliable, safe, and quality manner while assuring that contractual commitments are met. The Assurance Plan provides the framework for a results-oriented management system that focuses on performing work safely and meeting mission and customer expectations efficiently through continuous process improvement. Line management is responsible to set and execute annual performance objectives that will achieve the goals and expectations of the Assurance Plan. In addition, every LBNL employee is individually responsible for the quality and safety of his or her work.

Our policy is to implement the Assurance Plan in a way that enables compliance with DOE contract requirements and other customer agreements, that ensures our continued scientific research and programmatic success, and that is resource-efficient. The Assurance Plan is integral to keeping the Laboratory on course in achieving its mission and eliminating non-conformances and unacceptable risks. Our program emphasizes three principles:

- The most essential resources at LBNL are the creative scientists, engineers, and support personnel.
- People who perform the work have the greatest effect on outcome and process quality.
- Problem prevention is more cost-effective than problem correction.

Accordingly, our program establishes a management system that (1) recognizes that managing a laboratory that supports research is different from managing the research itself and (2) provides a process for continuous improvement in our performance in both aspects of Laboratory management.

Director
Ernest Orlando Lawrence
Berkeley National Laboratory

OBJECTIVES AND APPLICABILITY

The University of California (UC) Assurance Plan is a set of operating systems used to assure that LBNL organizations achieve reliable and safe performance in their work activities, in compliance with regulatory and contractual requirements. The Assurance Plan is the program document of the Office of Institutional Assurance. LBNL's assurance that the public, workers, the environment, and national assets are adequately protected and that business operations are performed effectively will be based on the effective use of assessment, performance metrics, and corrective action management described in the Assurance Plan. Through these tools, LBNL will meet requirements effectively and efficiently, identify and resolve problems and performance trends before they become significant issues, integrate and align work based on risk and performance, and eliminate duplications. The success of the Assurance Program will be directly reflected in LBNL's ability to self-identify and correct Lab problems and issues.

The Assurance Plan is designed to fulfill four main objectives:

- Describe the process for assuring acceptable performance of LBNL Operations and Financial Management divisions, departments, and programs to Lab management and the University of California Office of the President (UCOP).
- Detail the reporting relationship between LBNL and UCOP, as implemented by the Office of Institutional Assurance and the LBNL Contract Assurance Council.
- Describe the methodology to promote continuous improvement of LBNL operating and infrastructure programs and systems.
- Conform to the requirements of the DOE- UC contract for management of LBNL (No. DE-AC02-05CH11231) and DOE Order 226.1, *Implementation of Department of Energy Oversight Policy*.

The Assurance Plan applies to all LBNL Operations, Business, and Financial Management programs and systems as implemented in all Laboratory organizations, including Science divisions. For example, the Assurance Program includes monitoring and evaluation of financial, ES&H, and property management activities implemented in Science divisions as well as in Operations divisions.

The Assurance Plan implements a charter for the LBNL Contract Assurance Council. UCOP established this committee to assure that LBNL fulfills all requirement of the DOE-UC contract for management of LBNL (No. DE-AC02-05CH11231).

Assurance Program

The LBNL Assurance Program provides for the effective oversight of the Lab's management systems and operating processes to ensure that compliance, operational support for science, best management practices, and continuous improvement are achieved. Such assurance gives confidence to senior Laboratory management, the Department of Energy (DOE) and the LBNL Contract Assurance Council that the expectations and strategic goals of the DOE- UC contract for management of LBNL (No. DE-AC02-05CH11231) are met. The Assurance Program is implemented by the Office of Contract Assurance (OCA). This office:

- 1) Provides a structure for oversight and assurance activities.
- 2) Implements and maintains an institutional performance assurance program. This program is composed of the following elements:
 - a. Performance metrics. Establish and maintain metrics to monitor DOE contract performance evaluation measures, as well as Laboratory and Division-specific performance of vital operations. Metrics will be linked to the DOE mission and used to monitor internal controls, trends, and progress in fulfilling Laboratory mission.
 - b. Assessments and Reviews. Develop comprehensive assessment programs for Laboratory operations; including self-assessments, peer reviews, and technical reviews. Manage self-assessments, including: developing performance metrics and review protocols with appropriate organization and program management, maintaining the assessment process, and reviewing and validating performance results.
 - c. Corrective actions. Establish a corrective action management program for all Laboratory operations that allows for tracking and managing corrective actions that result from assessment findings. These data will be entered into a single Corrective Action Tracking System (CATS) in order to ensure documentation and validation that corrective actions are both properly implemented and effective.
 - d. Continuous improvement and lessons learned. Develop and maintain a Laboratory-wide lessons-learned program to provide a systemic approach towards continuous improvement. Evaluate lessons learned and distribute them to appropriate parties, including Divisions, the Laboratory, and the DOE complex. Ensure lessons learned are integrated into work practices.
- 3) Serves as the Independent Point of Contact for evaluating Price-Anderson Amendments Act issues and deficiencies, including tracking these issues to resolution.
- 4) Investigates incidents of significant concern to Laboratory management. Performs root cause analysis of these incidents and reports results to Laboratory and Division management.
- 5) Manages the DOE Occurrence Reporting and Processing System (ORPS), including assisting in investigations, causal analysis, and report writing, as appropriate.

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- 6) Regularly reports to Laboratory management, LBNL Contract Assurance Council, and DOE the status, trends, and issues arising from oversight and assurance activities.
 - 7) In conjunction with DOE, UCOP, and Lab Directorate, coordinate review and implementation of emerging DOE rules, orders, directives, and similar policy documents. Interact with DOE, LBNL, and UCOP staff on applicability of DOE policy and rules to the Laboratory.

The Office of Contract Assurance is an internal assurance organization, reporting to the Office of Institutional Assurance and authorized to have unrestricted access to personnel, records, and other information sources necessary to carry out its duties. At the direction of the Laboratory Directorate, the Office of Contract Assurance coordinates independent third party reviews in areas of business, finance, operations, ES&H, and other selected areas. The Office provides information and support to the LBNL Contract Assurance Council established by the University of California Office of the President.

ORGANIZATION AND GOVERNANCE

1.1 Corporate Organization

UCOP, LBNL senior management, and LBNL line management and staff manage LBNL operations, processes, and project activities to achieve the Laboratory's goals and mission. The University of California creates the framework for LBNL senior management to deploy resources effectively so that LBNL managers and staff can execute performance successfully. Using information provided from LBNL senior management and LBNL line managers and staff, the Office of Institutional Assurance provides assurance to UCOP, LBNL management, and DOE that the management systems and process controls are effective and efficient.

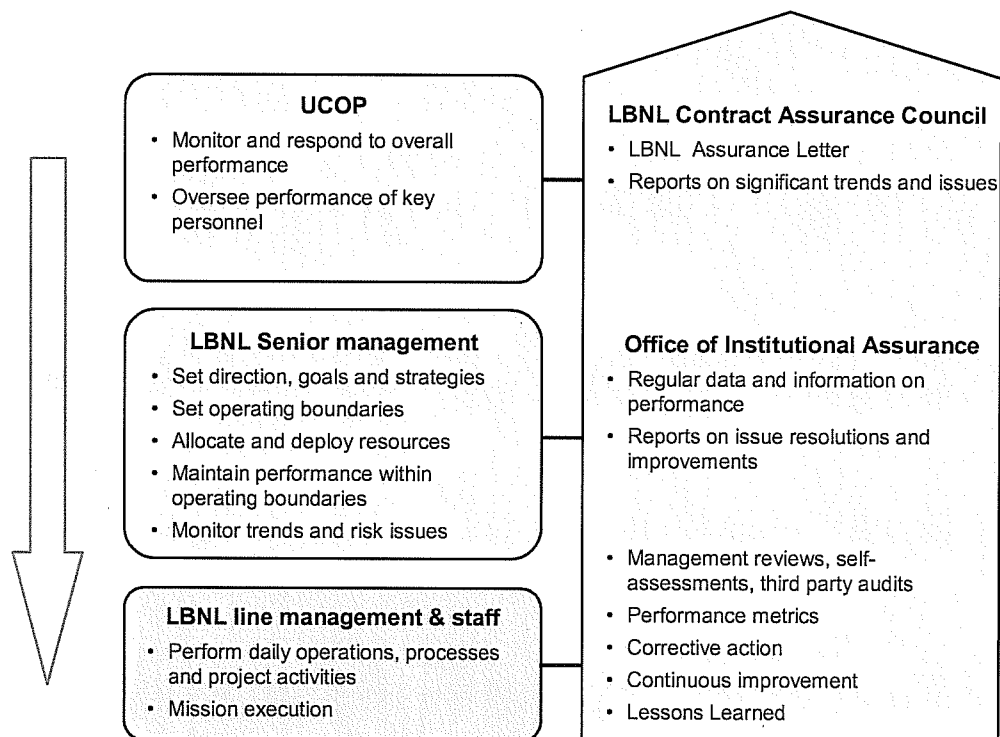


Figure 1: Integration of Assurance with UCOP, LBNL Management and LBNL line management and staff

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- **UCOP** oversees LBNL operations in a responsive, anticipatory, proactive, mission enabling, and cost effective manner that is valued by the DOE Office of Science. The UC oversight organization for LBNL spans all corporate levels of the University including the Regents, the UC President and Vice Presidents, and the Laboratory Director. The oversight function is performed by the LBNL Contract Assurance Council.

- **LBNL Contract Assurance Council**

The Lawrence Berkeley National Laboratory (LBNL) Contract Assurance Council advises the Vice President for Laboratory Management (VPLM) on Laboratory issues needing management attention. It reports through the VPLM to the UC President. The Council acts within the chain of line management as the means by which the VPLM ensures and coordinates the application of University resources and actions required for full compliance with all aspects of the LBNL contract. The Council leverages expertise in the functional organizations of the UC Office of the President to support the effective and efficient operation of the Laboratory.

The Council has responsibilities to determine:

- Adequacy of Laboratory policies, systems, procedures, and practices to protect DOE and UC assets
- Adequacy of performance measures and metrics
- Efficiency and effectiveness of systems
- Progress of management initiatives and improvements proposed by UC
- Areas that will require third-party assessments
- Resources required from UC to assist the Laboratory in meeting their mission and requirements.

The LBNL Contract Assurance Council will have transparent access to all relevant management information through the Laboratory's Balanced Scorecard, the Berkeley Laboratory Information System, and CATS.

The Council includes an appropriate mix of senior UC officers and external members who are appointed by the VPLM, who serves as the Council Chair, with the concurrence of the UC President. The UC Office of the President members are the Senior Vice President for Business and Finance; the Senior Vice President for University Affairs; the General Counsel/Vice President for Legal Affairs; the Vice Provost for Research; the UC Auditor; the Chair of the UC Academic Council; the Associate Vice President for Laboratory Operations; the Associate Vice President for Laboratory Programs; the Associate Vice President for Human Resources and Benefits; and the Deputy Associate Vice President for Laboratory Operations. The UC Council members have oversight and interface responsibilities for their laboratory counterparts.

The Council also includes four distinguished external members who provide additional perspective in assuring the administrative, operational, and programmatic performance of the Laboratory. The external members include scientists of national stature in areas germane to LBNL research, and operational experts in areas critical to the Laboratory.

The terms of the external members are three years, renewable, staggered so that approximately one-third of the external members rotate off each year. Except for the first term, which begins in 2005, terms begin January 1 and run through December.

The Council will meet monthly to review and discuss management and status reports, and will receive a quarterly assurance briefing addressing areas of the Council's responsibilities. The Executive Director for Business and Finance in the Office of Laboratory Management will provide staff support for Council meetings and interface with the LBNL Office of Institutional Assurance to ensure timeliness and adequacy of reporting.

- **LBNL senior management** sets the strategic direction, deploys resources, and maintains performance within approved operating boundaries. In fulfilling its duties, LBNL Management has the responsibility of mission accomplishment, program development, Laboratory stewardship and operational excellence. Its primary functions include:
 - Establish detailed strategies and implementation plans required to achieve DOE and UCOP performance expectations and to guide the work of the Laboratory.
 - Develop and implement management systems and process controls capable of assuring operation within acceptable risks.
 - Take appropriate actions to improve Laboratory performance based on self-assessment results and feedback received from the LBNL Contract Assurance Council.
- **LBNL line management and staff** conduct the daily work, processes, and activities of the Laboratory using management systems and process controls to achieve the objectives set by LBNL Management. LBNL organizations must:
 - Describe their organizational structure, functional responsibilities, levels of authority, and interfaces.
 - Plan for their functions and activities to deliver safe, reliable, and quality products and services.
 - Hire and retain staff proficient to perform their functions and activities.

Line managers and staff regularly evaluate performance with assessment tools developed by both line organizations and the Office of Institutional Assurance. These self-assessments are conducted to assure that performance is maintained within the operating boundaries set by LBNL management. Significant findings, including performance data outside of operating boundaries and other results from assessments, are reported to LBNL Management and the Office of Institutional Assurance and tracked for corrective actions.

- **The Office of Institutional Assurance (OIA)** assesses the effectiveness of management systems and process controls using a variety of assessment processes and tools. These include self-assessments, peer reviews, internal audits, external reviews, and oversight studies. OIA evaluates performance trends, monitors improvements, and reports risk issues to LBNL management and UCOP. A single Lab-wide database system tracks non-conformances (CATS) and provides exception reports to LBNL management when corrective actions are not completed in a timely manner. The Office of Institutional Assurance works with managers, supervisors and staff to establish performance metrics, develop assessment protocols, implement corrective actions and improvements, and disseminate lessons learned. OIA has the added responsibility of providing the LBNL

Management and UCOP with the objective evidence of significant risk issues and verification of the process improvements.

SECTION 2

ASSURANCE PROCESS

2.1 Assurance Process

Assurance activities confirm conformance to operating boundaries, and if short of that, to identify any unacceptable risks that are outside the boundaries and to institute the measures necessary to re-establish conformance. The strategic output is to provide UCOP and LBNL management with regular data and information on performance trends and significant or emerging risks. The assurance process flow is as follows:

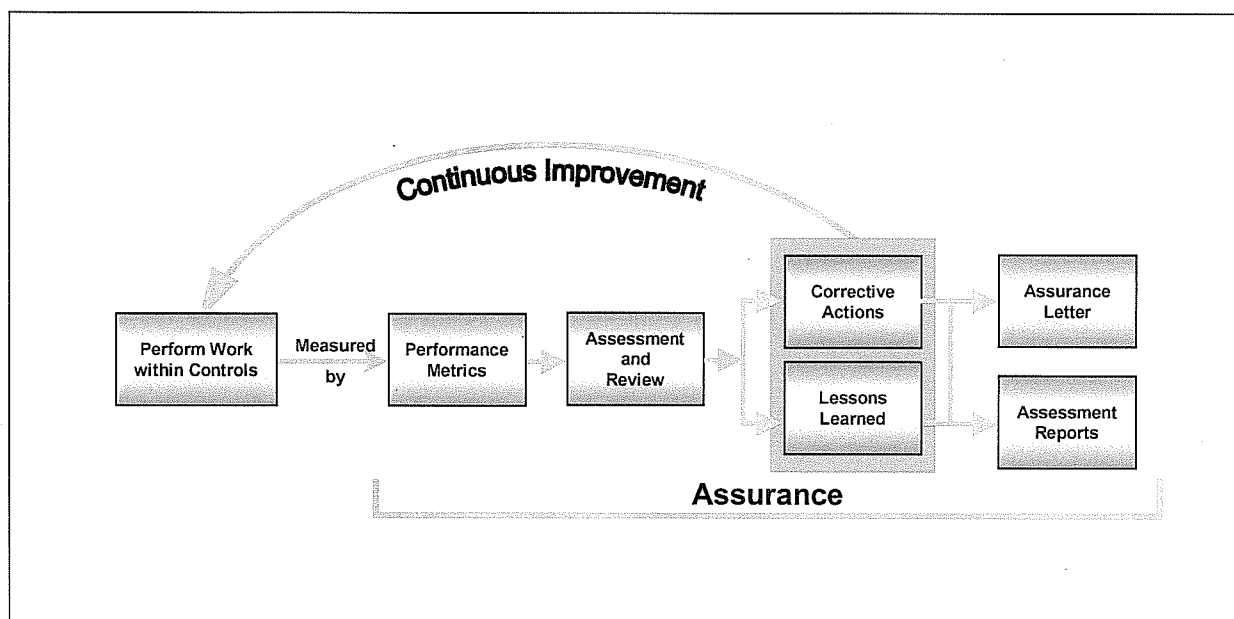


Figure 2: Assurance Process Flow

Lab organizations must regularly evaluate and improve the performance of their units. The Assurance Program provides the processes and tools to regularly monitor performance for conformance with approved operating boundaries. OIA not only identifies unacceptable risks but also strives for lab-wide operational and financial excellence through continuous improvement. LBNL organizations implement the assurance process by:

- Conducting self-assessments
- Conducting management assessments

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- Conducting independent assessments
 - Correcting deficiencies and improving processes, products, and services.

The Office of Institutional Assurance will use assurance process results to verify that:

- Laboratory policies, procedures, and practices are adequate to protect DOE and UC assets.
- Laboratory management systems and process controls are working as intended with regard to managing the Laboratory's risk while accomplishing its mission.

Data and information on the status, progress, and resolution of performance issues are readily available through web-based reports and printed materials to all interested parties in UCOP, LBNL senior management, and LBNL line management and staff.

2.2 Performance Metrics

Performance metrics are a vital tool in quantifying performance and provide a basis for many LBNL assessment processes. Performance metrics serve as organizational benchmarks and effectively and efficiently communicate Laboratory organizations' progress in meeting mission requirements and standards to DOE, UCOP, and Laboratory management. When feasible, the LBNL assurance process aligns these metrics to avoid redundant efforts in satisfying the various assessment processes. LBNL uses both leading measures with predictive qualities to drive future performance and lagging measures to assess past performance.

2.2.1 Office of Science Performance Appraisal

LBNL works with DOE and UCOP to plan, coordinate and oversee the DOE Office of Science laboratory appraisal process. Contract performance metrics are used to monitor and evaluate LBNL work performance against established annual goals and DOE requirements. The Office of Institutional Assurance assists in creating these performance measures and monitoring performance. OIA manages scheduling, data gathering, reporting, and analysis. Internal Audit validates the results of the appraisal reports prepared by each functional area.

2.2.2 Operations and Financial Management Balanced Scorecard

The Operations and Financial Management Balanced Scorecard is a set of quantifiable measures chosen to execute strategic objectives and bring focus and alignment to the organization. The measures are designed by functional area managers in collaboration with OIA. These measures are a tool to gauge progress towards strategic goals and communicate to employees, UCOP, and DOE the outcome and performance drivers for achieving Laboratory mission.

The Balanced Scorecard measures link Financial, Customer, Internal Processes, and Learning and Growth perspectives to mission success.

2.2.3 ES&H Division Self-Assessment Performance

ES&H Division Self-Assessment performance metrics are developed to demonstrate each Laboratory division's effectiveness in implementing, maintaining, and improving Integrated Safety Management (ISM) in their operations and activities. The metrics are based on the five core functions and seven guiding principles of ISM. These metrics are developed annually to promote improvement, respond to deficiencies noted in previous ES&H assessments, and respond to DOE and Laboratory management concerns.

2.3 Assessment

Assessments are the primary mechanism for assuring that LBNL organizations and activities function within acceptable operating boundaries, progress toward strategic goals, and satisfy Laboratory mission needs. Three forms of assessment are performed at LBNL:

- Self-assessments conducted by senior managers, line managers, and staff
- Internal reviews performed by LBNL organizations independent of the assessed programs
- External reviews performed by parties independent of LBNL.

These assessments incorporate differing areas of focus and multiple perspectives to produce complementary forms of assurance to Lab management and UCOP.

2.3.1 Self-Assessment

Self-assessments are internal assessments of the LBNL functions performed by functional managers, line managers, and staff. The Office of Institutional Assurance will work with each program to:

- Develop performance criteria
- Implement assessment protocol that will assess performance in operating within operating boundaries, fulfilling LBNL management goals, and meeting contractual obligations
- Review and validate an annual self-assessment report
- Prepare an annual report summarizing the results of the self-assessment process

LBNL functional managers must regularly assess the performance of their organizations and functions to determine how well objectives and goals are met. Assessments by line managers focus on identifying and resolving both singular and systematic management issues and problems that may hinder the organization in achieving its scientific and operational objectives. Performance metrics may serve as the basis for self-assessment activities. Management should also consider any previous findings from external audits, internal reviews, and regulatory inspections when performing assessments. Managers should assess their processes for the following:

- Planning

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- Organizational interfaces (internal and external to the organization)
 - Integration of management systems (e.g., safety, security, quality, project)
 - Organizational effectiveness
 - Use of performance metrics
 - Training and qualifications
 - Corrective action management (tracking, implementation, effectiveness)
 - Supervisory oversight and support

The management assessments should include an internal evaluation of such conditions as the state of employee knowledge, motivation, and morale; communication among workers; the existence of an atmosphere of creativity and improvement; and the adequacy of human and material resources. The assessments should also involve direct observation of work so that the manager is aware of the interactions at a work location. The observations can be supplemented with worker and customer interviews, safety and performance documentation reviews, and drills or exercises.

The results of management assessments must be documented and used for continuous improvement. Assessment reports should evaluate performance against appropriate performance measures, opportunities for improvement, and noteworthy practices. Supporting documentation can include minutes of staff and operations meetings, progress reports, job expectation evaluations, inspection reports, and self-assessment reports.

2.3.2 Internal Review

Internal reviews assess operational effectiveness and programmatic adherence to missions, goals, and objectives. Internal reviews are independent assessments performed by technically and programmatically knowledgeable personnel within LBNL who are free of direct responsibility in the areas they assess.

LBNL organizations that routinely conduct internal reviews include the Office of Institutional Assurance; the Environment, Health and Safety Division; Internal Audit Services; and the Safety Review Committee. Each assessment organization has established protocols for conducting assessments and providing feedback to the assessed organizations. The type and frequency of independent assessments are based on the status, complexity, risk, and importance of the activities or processes being assessed.

Examples of independent assessments include:

- Evaluating work performance and process effectiveness
- Evaluating compliance to the management system requirements (e.g. regulatory requirements and program document standards)
- Validating performance in the Office of Science Performance Appraisal
- Identifying abnormal performance and potential problems
- Identifying noteworthy practices and opportunities for improvement
- Documenting and reporting results
- Verifying satisfactory resolutions of reported problems

Results of independent assessments provide an objective form of feedback to Lab management that is useful in confirming acceptable performance and identifying improvement opportunities. The results must be documented in an assessment report.

2.3.3 External Review

External reviews are assessments performed by parties independent of LBNL. These reviews may be performed by regulatory agencies, DOE representatives, peers within the DOE complex, and experts from private industry. These reviews are initiated primarily by regulatory requirements, LBNL management concerns, and DOE operations and procedures.

Reviews may be initiated by external regulatory agencies intent on ensuring that LBNL operations are compliant with federal, state, and local regulations. DOE headquarters and Berkeley Site Office representatives may also perform reviews to evaluate operations and assess implementation of applicable DOE orders and directives.

Peer reviews, another form of external assessment, may assure the quality of research, operations, and project management. These reviews are performed by peers from other DOE complex sites, universities, and private industry. Peer reviews are often used to assess operational effectiveness, programmatic adherence to missions, goals, and objectives; and regulatory compliance.

The assessed organization is responsible for responding to external review findings. This includes tracking deficiencies, implementing corrective actions, and communicating opportunities for improvement and noteworthy practices as appropriate. The Office of Institutional Assurance will coordinate this process.

2.4 Assurance Product

2.4.1 Assurance Reports

- **Contract Assurance Council Reports**

The Office of Institutional Assurance (OIA) will prepare reports for the LBNL Contract Assurance Council. The Council will hold regular meetings or conference calls to discuss information provided by the Office of Institutional Assurance. At least quarterly, the Council will meet at a University-designated location for more comprehensive discussion of Laboratory assurance.

OIA reports will detail:

- Status and development of the assurance process
- Significant issues detected through the assurance process
- Events and conditions that result in reports to external agencies, including PAAA and ORPS reports
- Significant lesson learned resulting from deficiencies and noteworthy practices

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- Corrective action status of findings from external assessments and significant findings from self-assessments
 - Status of management initiatives proposed by the University
 - Annual Assessment Reports

- **Annual Assessment Reports**

The Office of Institutional Assurance will prepare annual Self-Assessment reports summarizing the results of functional self-assessments. Each report will assess the program's performance in operating within appropriate operating boundaries, fulfilling LBNL management priorities, and meeting contractual obligations. The reports will summarize results of the various assessments during the performance year, including self-assessment and any internal and external assessment. Each report will describe findings and noteworthy practices of the assessed program and propose opportunities for improvement.

The annual assessment reports will be prepared for Laboratory management, the assessed programs, and the LBNL Contract Assurance Council.

2.4.2 Assurance Letter

The compilation of performance data and information forms the basis for the submission of the annual *LBNL Assurance Letter*. OIA will prepare this letter for the LBNL Contract Assurance Council. Following Council review, the Vice President for Laboratory Administration will sign the letter for submission to the Department of Energy.

The *Assurance Letter* provides written assurance to the Lab's governing and management bodies that:

- The Laboratory's strategic objectives and implementation plans are executed within defined operating boundaries and in a manner that produces the desired results for mission accomplishment, program development, Laboratory stewardship, and operational and financial management excellence.
- The Laboratory's management systems and process controls, including the assurance process itself, are working as intended to protect DOE and UC assets. Periodic reviews (including those performed by Internal Audit Services) of Laboratory management systems and controls are performed to provide reasonable assurance that the systems and controls are meeting objectives and operating effectively.
- Appropriate actions are taken to address risk issues and adverse trends.
- Laboratory operations adequately provide for the safety and security of staff, the public, and the environment.
- Management systems and process controls employed by LBNL are documented and satisfactory to DOE.

CONTINUOUS IMPROVEMENT

3.1 Continuous Improvement

Continuous improvement is a combination of systems improvement and corrective actions that (1) uses feedback information to improve processes, products, and services; (2) prevents or minimizes operational problems (i.e. contractual, legal, financial, and ES&H deficiencies); and (3) when discovered, corrects any problems that occur.

Continuous improvement involves:

- Reviewing information and data on processes, products, or services to identify adverse conditions
- Analyzing the adverse conditions and determining the causes
- Segregating the processes, products, or services if the adverse conditions may lead to significant consequences
- Developing alternative approaches for addressing the adverse conditions and preventing recurrence
- Implementing approved solutions
- Evaluating the improvements or corrections
- Providing lessons learned to other organizations

This process should be part of the normal operation of all LBNL working groups and should be documented in the normal operational records and reports (e.g., meeting minutes, progress and activity reports, readiness reviews, and assessment and inspection reports). Significant deficiencies may require separate reports that detail root causes and measures implemented to prevent recurrence.

3.1.1 Corrective Action

Identified concerns and deficiencies should be addressed in a timely manner, as appropriate for each finding's significance. Each division is responsible for tracking corrective actions resulting from internal and external assessments. These findings are tracked in CATS. However, findings resolved at the time of discovery do not require tracking in CATS.

A corrective action plan is often necessary for findings that require multiple corrective actions implemented over a significant time period. A corrective action plan must be prepared by the responsible manager to allow for additional planning and scheduling. The corrective action plan may require senior Lab management review and approval to address risk management, funding, and resource allocation issues. Once approved by the

appropriate Laboratory authority, the corrective actions are tracked in CATS until completion and management verification.

The Office of Institutional Assurance validates that corrective actions are implemented to effectively resolve findings. OIA also provides regular status reports on the corrective actions to advise the LBNL Contract Assurance Council and Laboratory management on progress and completion. Periodically, OIA performs trending and root cause analysis of CATS entries to prevent recurrence of concerns and deficiencies.

3.1.2 Lessons Learned

The LBNL Lessons Learned Program helps the Laboratory community learn from our mistakes (and the mistakes of others) so that they are not repeated. The Office of Institutional Assurance, in consultation with various sources (e.g. the EH&S Division), identifies adverse events and conditions that may have broad applicability to the Lab community. In an effort to prevent recurrence, these events, along with the causes and corrective actions, are communicated to appropriate Laboratory staff and integrated into Laboratory procedures and operations. The ultimate goal of the Lessons Learned Program is to continually improve our performance across all Laboratory functions.

We use several different sources of information for our Lessons Learned Program. These include:

- Accidents and near misses that occur at the Laboratory. The EH&S Division has prepared several [Lessons Learned Summaries](#) based on events that have taken place at the Laboratory.
- [The DOE Lessons Learned Information Services Home Page](#). This provides a link to a [keyword searchable compilation of lessons learned summaries](#) of events that have occurred throughout the DOE complex. It also provides [links to other useful lessons learned databases and information](#)
- [The DOE Lessons Learned List Server](#). This is a subscription-based e-mail service available to all LBNL staff. Lessons learned statements are distributed via email.
- Adverse conditions and noteworthy practices identified through the Assurance Program.

Lessons learned are communicated in multiple ways, depending on the significance and applicability of each event. Possible methods of communication include:

- Submittal to the DOE Lessons Learned List Server
- One-page description of an event or condition, root causes, and corrective actions distributed electronically and in hard copy format to appropriate staff. These lessons learned are posted on the LBNL Lessons Learned web page.
- A brief paragraph in Today At Berkeley Lab that warns of an adverse condition in order to increase awareness.
- Division-specific email that provides a heads-up to staff on a potential deficiency.

Lessons learned are disseminated through various sources, including the Office of Institutional Assurance, the EH&S Division, and Division and program management.

The Office of Institutional Assurance will monitor and record communication of lessons learned.